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NOMENCLATURAL NOTES ON *POLYNEMA* (HYMENOPTERA: MYMARIDAE), WITH DESCRIPTION OF A NEW SPECIES[1]

M. E. Schauff and E. E. Grissell

(MES) Maryland Center for Systematic Entomology, Department of Entomology, University of Maryland, College Park, Maryland 20742; (EEG) Systematic Entomology Laboratory, IIBIII, Agricultural Research Service, USDA, % National Museum of Natural History, Washington, D.C. 20560.

Abstract.—*Polynema ema,* new species, a parasite of the lily planthopper, (*Megamelus davisi* Van Duzee), is described and illustrated. *Psilus ciliatus* Say, previously reported as a *Polynema* and believed to be the parasite of the lily planthopper, is a *nomen dubium. Polynema ciliatum* Perkins is considered a valid species and not a homonym of *ciliatus* Say.

In attempting to identify a species of *Polynema* parasitic upon eggs of the lily planthopper (*Megamelus davisi* Van Duzee), we noticed that the name *Polynema ciliata* (Say) had been used by Zimmerman (1948) for the parasite of this planthopper. We found also that Perkins (1910) had described a *Polynema ciliata,* thus creating an apparent homonym. After studying the literature and available specimens, however, we believe that Say's *ciliatus* is not recognizable to genus, that Perkins' *ciliata* is not a homonym, and that the parasite of the lily planthopper is an undescribed species. We take this opportunity to clarify the nomenclature of *P. ciliata* (Say) (of authors) and to describe the incorrectly named parasite of the lily planthopper.

Morphological terminology used here is that of DeBauche (1948), except for face height, which is the distance from the oral cavity to the median carina. The abbreviation LMC is used for the length of the longest marginal cilia of the forewing. Measurements of body length, ratios of body regions, etc., were made dorsally along the midline. Wings, antennae, and legs were measured in their extended form. Measurements were made with the aid of both a compound (100× and 160×) and a dissecting microscope (ca. 60×). Ranges and means were calculated from a random sample of 15 individuals from the type-series.

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Psilus ciliatus Say, *nomen dubium*

Psilus ciliatus Say 1828: 80.
Galesus ciliatus: Ashmead 1887: 195 (list).
Diapria ciliatus: Cresson 1887: 251 (list); Ashmead 1893: 428 (list, probably a mymarid); Dalla Torre 1898: 436 (list); Kieffer 1916: 76 (repeat of orig. desc. in German).
Trichopria ciliata: Kieffer 1911: 64 (list).
Polynema ciliatum: Peck 1951: 417 (n. comb.).

Psilus ciliatus Say has a long history of varied placement in two different superfamilies of Hymenoptera (Proctotrupoidea and Chalcidoidea). Most of the citations of this species are mere listings, and it is probable that none of the authors except Say ever saw the type-specimen. This specimen is lost, and based upon Say's original description it is not possible to assign *ciliatus* to a genus. For this reason we do not accept Peck's placement (1951) of *ciliatus* as a *Polynema*. Because there is no way positively to associate Say's description with a known genus or species, we relegate *ciliatus* to the status of a *nomen dubium*. However, we agree with Ashmead (1893) and Peck (1951) that *ciliatus* is probably a mymarid on the basis of the enlarged antennal club and ciliate wing margins.

We do not know how or why the name *ciliata* (Say) of authors became applied to the *Polynema* that attacks *Megamelus davisi* Van Duzee (Van Duzee, 1896: 18; Zimmerman, 1948: 248). There is no reason to associate this parasite with the name *ciliata*, because, with its extremely long ovipositor, it is quite distinct among all *Polynema*. On the basis of the "oblong oval acute club" as described by Say, his specimen would have been a female, and he certainly would have mentioned the ovipositor if it were prominent. Say mentioned no host, so that host-association is not possible.

Polynema ema Schauff and Grissell, New Species

Figs. 1–3

Cosmocoma ciliata (Say): Van Duzee, 1896: 18 (misidentification).
Polynema ciliata (Say): Zimmerman, 1948: 248 (misidentification).
Polynema ciliata (Say): Wilson and McPherson, 1981: 346 (misidentification).

Holotype female.—Length 0.63 mm excluding ovipositor (0.60–0.66, $\bar{x}$ = 0.64). Ratio head:thorax:abdomen:ovipositor 8:19:20:30. Head, thorax (except pronotum), and abdomen brown; funicle segments, club, last tarsal segment of legs lighter brown; scape, pedicel, prothorax, legs, petiole yellow. Head slightly wider than thorax (12:10), vertex alutaceous; median, frontal supraorbital carinae complete, occipital suture reaching foramen; posterior ocelli placed at junction of supraorbital carina and occipital suture; POL: OOL 7:1; frontal grooves converging below toruli, ending on either side of

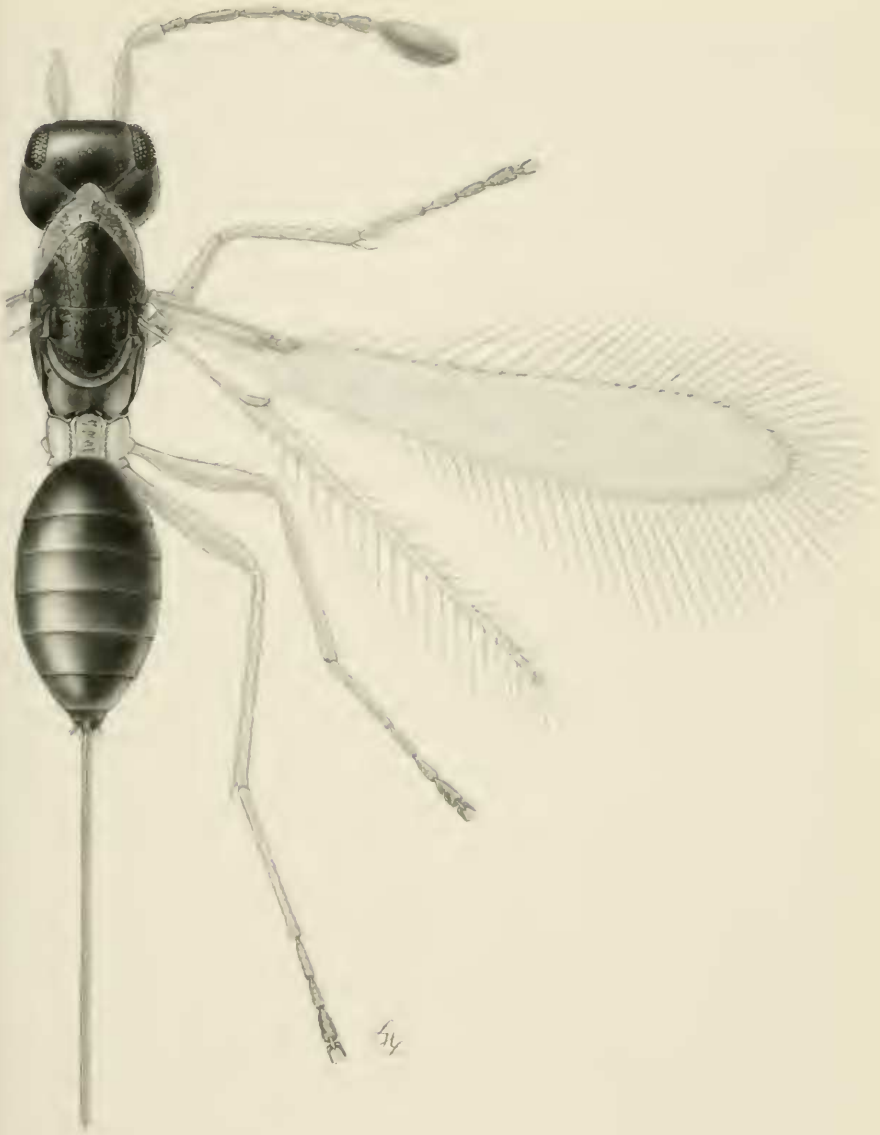

Fig. 1. *Polynema ema*, female, habitus.

clypeus, interocular distance:face height 5:7; torulus removed ca. 1 diameter from median carina, laterally against frontal carinae; antennal ratio (Fig. 2) beginning with scape 33:19:8:21:15:12:11:12:36; club with 7 sensory ridges; ratio pronotum:scutum:scutellum:propodeum 5:5:5:4. Pronotum aluta-

ceous, becoming coriaceous laterally, divided medially, each side with 5 setae on anterior margin, 3 setae at posterior margin, posterior ½ of prosternum divided medially, scutum alutaceous, notauli interrupted by large fovea in anterior 1/5; scutellum alutaceous (weaker than scutum), placoid sensilla removed ca. 3 diameters from anterior margin, separated ca. 5 diameters, transverse row of foveae in posterior 1/5; propodeum smooth, descending, median carina broken, ending in a tooth above petiolar insertion (viewed laterally), with a seta posterolaterally above hindcoxa; forewing (Fig. 1) length 0.82 mm (0.82–0.88, $\bar{x}$ = 0.84), width 0.13 mm (0.12–0.14, $\bar{x}$ = 0.13), LMC 0.20 mm (0.18–0.20, $\bar{x}$ = 0.19); hindwing length 0.72 mm (0.67–0.75, $\bar{x}$ = 0.71), width 0.02 mm (0.019–0.024, $\bar{x}$ = 0.20); petiole 2× as long as wide, produced into a tooth ventrally, (Fig. 3); ratio femur:tibia:tarsi as follows: foreleg 11:11:13, midleg 10:14:17, hindleg 12:16:22, coxa with small group of setae on inner surface, hindbasitarsus 4× as long as tarsomere 2. Abdomen ovate elliptic, length 0.30 mm (0.30–0.41, $\bar{x}$ = 0.36), faintly striate dorsally; ovipositor exserted 0.45 mm (0.35–0.50, $\bar{x}$ = 0.42).

Allotype male.—Length 0.67 mm (0.60–0.75, $\bar{x}$ = 0.66). Similar to female except the following: antennal ratio beginning with scape 30:22:25:26:28:27:29:28:28:27:27:26:26; petiole not produced into a tooth ventrally; abdomen ovate, length 0.22 mm (0.18–0.25, $\bar{x}$ = 0.22)

Types.—Holotype ♀ on point (antenna and wings on slide) with data as follows: "Ill., Jackson Co., 3 mi. N. of Pomona, Etherton Pond, 25 Aug., 1979, S. W. Wilson, ex. eggs of *Megamelus davisi* on *Nuphar advena*." Deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C., Type No. 100015. Allotype and paratypes (22 ♂ and 36 ♀) with same data as above. Paratypes deposited in the British Museum (Natural History), London, Canadian National Collection, Ottawa, and National Museum of Natural History.

Other specimens.—Two ♂ and 4 ♀ from Honolulu, Hawaii, reared from the lily planthopper, E. C. Zimmerman collector (date unknown, probably 1945); 2 ♀, Md., Prince Georges Co., Laurel, Patuxent Wildlife Research Center, 25 June, 1980, L. Masner, pan trap in pondside vegetation.

Variation.—Quantitative estimates of variation are given in the species description. Color varied between series of specimens and between specimens of the same series. The specimens from Hawaii are nearly uniformly dark brown, with the legs, pronotum, scape, and pedicel light brown. Most specimens in the type-series are similar to the holotype. However, a few females are lighter in color with the yellow faded to very light yellow (coxae occasionally nearly white), and males may have the abdomen very dark brown or black mesad. The occipital suture does not reach the foramen in some specimens, ending only slightly past the lateral ocellus. The structure of the median propodeal carina is very difficult to see in this species both

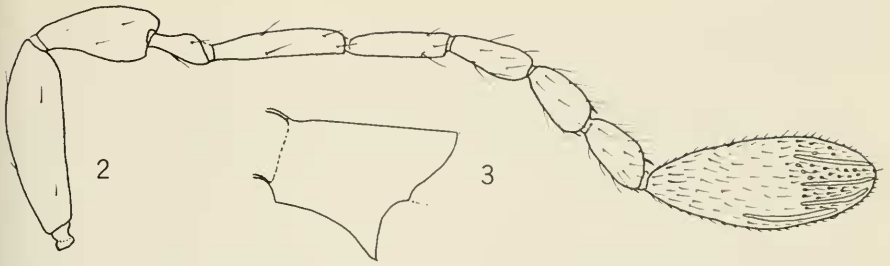

Fig. 2, 3. *Polynema ema*, female. 2, Antenna, lateral view. 3, Petiole, lateral view.

in slide-mounted and pointed specimens. Scanning electron micrographs show the area to be slightly sunken and composed of irregular broken carina that forms a keel posteriorly. When viewed laterally under the compound microscope, this area appears as a raised "tooth" above the petiolar insertion.

Diagnosis.—Females of this species are distinct from other *Polynema* by virtue of the long slender forewing (6 times as long as broad), the ovipositor exserted the length of the abdomen or more, and the presence of the ventral tooth on the abdominal petiole. Female *Polynema* normally have the forewing only 3 or 4 times as long as broad, the abdominal petiole without a ventral tooth, and the ovipositor not exserted. Males of *Polynema* (as with most mymarids) are more difficult to separate; however, the narrow forewing may be used to distinguish this species.

Remarks.—*Polynema ema* probably will be found to occur throughout the range of its host, *Megamelus davisi*. In the continental United States, *M. davisi* is known throughout the eastern states and west as far as Kansas (Metcalf, 1943; Beamer, 1955). Van Duzee (1896: 18) was the first to associate *P. ema* with *Megamelus* in Michigan. Wilson and McPherson (1981: 346) recently made brief mention of this parasite in relation to its host in Illinois. According to Zimmerman (1948: 248), *Polynema ema* [reported as *ciliata* (Say)] was "brought to Honolulu from Michigan in 1941 by Fullaway and it quickly established itself on local leafhopper colonies" of *Megamelus davisi* (reported as *angulatus* Osborn, a synonym of *davisi*).

Etymology.—The species epithet is an euphonius combination of arbitrary letters.

Polynema ciliatum Perkins

Polynema ciliata Perkins, 1910: 666.

As previously mentioned, we do not accept the placement of *ciliatus* Say as a *Polynema*. Therefore, Perkins' *ciliatum* is not a homonym, and having

seen the type, we consider it a valid species. It is known only from Oahu, Hawaiian Islands.

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